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13.80.– High– and super–high–energy interactions, energy≥1 GeV

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13.80.F Inelastic scattering, two–particle final states

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21. NUCLEAR STRUCTURE

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24. NUCLEAR REACTIONS AND SCATTERING, GENERAL

24.30.– Resonance reactions and scattering

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25. NUCLEAR REACTIONS AND SCATTERING, SPECIFIC REACTIONS

25.20.+ Photonuclear reactions and scattering ($A \geq 5$)

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25.30.+ Lepton-induced reactions and scattering ($A \geq 5$)

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27.90.+ $220 \leq A$

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31.30.– Atomic structure and spectroscopy

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41.80.+ Optical properties

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42. FLUID DYNAMICS

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43. PLASMA PHYSICS

43.20.– Elementary processes in plasma

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43.45.– Plasma waves: oscillations and instabilities

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43.45.M Plasma turbulence

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43.50.– Plasma production and heating

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43.55.– Plasma equilibrium and confinement

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51. STRUCTURE OF LIQUIDS AND SOLIDS; CRYSTALLOGRAPHY

51.70.– Defects in crystals

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51.80.– Radiation damage and other irradiation effects

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51.90.+ Other topics in structure of liquids and solids

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52. MECHANICAL AND ACOUSTIC PROPERTIES OF CONDENSED MATTER

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53. LATTICE DYNAMICS

53.10.+ General theory

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53.20.– Phonons and vibrations in crystal lattices

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54. EQUATIONS OF STATE, PHASE EQUILIBRIA, AND PHASE TRANSITIONS

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61. ELECTRON STATES

61.30.– Nonlocalized single–particle electronic states

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61.80.E Polarons

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61.80.G Complex centers

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62. ELECTRONIC TRANSPORT IN CONDENSED MATTER

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62.20.– Conductivity phenomena in semiconductors and insulators

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62.20.D General theory, scattering mechanisms

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62.20.H High field and nonlinear effects

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62.20.M Galvanomagnetic and other magnetotransport effects

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62.20.P Thermoelectric effects

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62.90.+ Other topics in electronic transport in condensed matter

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63. ELECTRONIC STRUCTURE AND ELECTRICAL PROPERTIES OF SURFACES, INTERFACES, AND THIN FILMS

63.60.– Thin films

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63.90.+ Other topics in electrical properties of surfaces, interfaces, and thin films

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One possibility of producing large-current ion beams —B. I. Ivanov. **20**(3), 72–4 (5 Aug. 1974); CPM-7501X0236

64. SUPERCONDUCTIVITY

64.20.– Equilibrium properties

Temperature domains in superconductor films —A. F. Volkov and Sh. M. Kogan. **19**(1), 4–6 (5 Jan. 1974); CPM-7406X0004

Spin resonance and Knight shift in superconductors —R. G. Mints. **19** (5), 152–3 (5 Mar. 1974); CPM-7406X0324

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64.40.– Nonequilibrium and transport properties

Oscillations of the phase of the order parameter upon propagation of sound in a superconductor —R. A. Vardanyan and S. G. Lisitsyn. **19**(5), 164–5 (5 Mar. 1974); CPM-7406X0336

Hypothesis concerning the possible effect of nonequilibrium high-temperature superconductivity —N. B. Brandt and V. V. Tolmachev. **19**(7), 237–8 (5 Apr. 1974); CPM-7408X1395

Possibility of existence of electronic sound waves in superconductors —A. G. Aronov and V. L. Gurevich. **20**(5), 147–8 (5 Sep. 1974); CPM-7502X1371

64.40.K Thermal conductivity

Observation of superconducting current excited in a superconductor by heat flow —N. V. Zavaritskii. **19**(4), 126–8 (20 Feb. 1974); CPM-7406X0126

Thermoelectric phenomena in superconductors and thermomechanical circulation effect in a superfluid liquid —V. L. Ginzburg, G. F. Zharkov, and A. A. Sobyanin. **20**(3), 97–8 (5 Aug. 1974); CPM-7501X0261

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64.40.P Critical currents and flux pinning ac behavior

Dependence of the critical-current density on the grain dimension in polycrystalline niobium —L. Ya. Vinnikov, O. V. Zharikov, Ch. P. Kopetskii, and E. B. Shiyanova. **19**(1), 3–4 (5 Jan. 1974); CPM-7406X0003

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Isothermal domains in quasi-one-dimensional superconductors —K. K. Likharev. **20**(11), 338–9 (5 Dec. 1974)

64.60.+ Tunneling and coupled superconductors

Weak-interaction neutral currents and the Josephson effect —A. I. Vainshtein and I. B. Khriplovich. **20**(2), 34–5 (20 Jul. 1974)

High-frequency behavior of the amplitude of a nonstationary Josephson current —L. L. Malinovskii. **20**(8), 250–1 (20 Oct. 1974)

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64.70.– Superconducting materials

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Superconductivity of Nb–Ru alloys synthesized at high pressure —S. V. Popova, L. N. Fomicheva, and N. I. Pal'nikov. **20**(10), 298–9 (20 Nov. 1974); CPM-7505X0058

64.90.+ Other topics in superconductivity

Thermoelectric power and nonstationary Josephson effect in S–N–S structures —A. G. Aronov and Yu. M. Gal'perin. **19**(5), 165–6 (5 Mar. 1974); CPM-7406X0337

Certain singularities of the thermocirculation effect in superconductors and in a superfluid liquid —G. F. Zharkov and A. A. Sobyanin. **20** (3), 69–71 (5 Aug. 1974); CPM-7501X0233

65. MAGNETIC PROPERTIES AND MATERIALS

65.20.– Diamagnetism and paramagnetism

Nature of noninteracting spins in organic paramagnets —A. V. Zvarykina, V. B. Stryukov, D. N. Fedutin, and A. B. Shapiro. **19** (1), 1–2 (5 Jan. 1974); CPM-7406X0001

Magnetic susceptibility of semimetallic Bi–Sb alloys in the ultraquantum limit —N. B. Brandt, E. A. Svistova, and N. V. Semenov. **19**(2), 66–8 (20 Jan. 1974); CPM-7406X0066

Magnetic properties of nickel–iodine boracite —I. S. Zheludev, T. M. Perekalina, E. M. Smirnovskaya, S. S. Fonton, and Yu. N. Yarmukhamedov. **20**(5), 129–30 (5 Sep. 1974); CPM-7502X1353

65.30.– Magnetically ordered materials, intrinsic properties

Phase transitions in a two-dimensional ferromagnet with "easy plane" anisotropy —Yu. S. Karimov and Yu. N. Novikov. **19**(5), 159–60 (5 Mar. 1974); CPM-7406X0331

Discontinuity of the hyperfine field at Co^{59} nuclei in intermetallic compounds with gadolinium —K. P. Belov, V. A. Vasil'kovskiĭ, N. M. Kovtun, A. K. Kupriyanov, and S. A. Nikitin. **20**(10), 304–5 (20 Nov. 1974); CPM-7505X0064

65.30.C Saturation moments and magnetic susceptibility

Test of three scaling functions for $Y_3Fe_5O_{12}$ —I. K. Kamilov, Kh. K. Aliev, and M. M. Magomedov. **19**(2), 78–80 (20 Jan. 1974); CPM-7406X0078

Magnetic moment of Mn atoms in the $Ni_{1-x}Mn_x$ system —P. N. Stetsenko and V. V. Surikov. **19**(3), 97–100 (5 Feb. 1974); CPM-7406X0097

Observation of Dzyaloshinskiĭ interaction in three-nucleus clusters of copper (II) —B. S. Tsukerblat, V. M. Novotortsev, B. Ya. Kulyavskaya, M. I. Belinskii, A. V. Abov, A. N. Bazhan, and V. T. Kalinnikov. **19**(8), 277–8 (20 Apr. 1974); CPM-7409X0259

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65.30.E Exchange and superexchange interactions

Temperature hysteresis of the magnetization in orthoferrites at the compensation point —V. N. Derkachenko, A. M. Kadomtseva, V. A. Timofeeva, and V. A. Khokhlov. **20**(4), 104–5 (20 Aug. 1974); CPM-7502X0276

Ferromagnetism of 3d metals —I. A. Akhiezer, V. G. Syshchenko, and E. M. Chudnovskiĭ. **20**(11), 342–3 (5 Dec. 1974)

65.30.J Critical point effects, specific heats, short-range order, and magnetic transitions, general

Nonlinear absorption of electromagnetic energy in an isotropic ferromagnet —V. M. Gryanik. **19**(1), 25–6 (5 Jan. 1974); CPM-7406X0025

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Ferromagnetic semiconductor near the Curie temperature as a disordered medium —Yu. I. Balkarei and E. V. Chenskiĭ. **20**(2), 43–4 (20 Jul. 1974)

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Visual observation of coexisting phases in the magnetic phase transition in noncollinear GdIG —N. F. Kharchenko, V. V. Eremenko, and S. L. Gnatchenko. **20**(9), 280–1 (5 Nov. 1974); CPM-7504X0514

65.30.L Ferromagnetic–paramagnetic transitions

Test of three scaling functions for $Y_3Fe_5O_{12}$ —I. K. Kamilov, Kh. K. Aliev, and M. M. Magomedov. **19**(2), 78–80 (20 Jan. 1974); CPM-7406X0078

65.30.N Ferromagnetic–antiferromagnetic transitions

Observation of ferromagnetic state in antiferromagnetic alloys of the $Mn_{1-x}Fe_xAs$ system —A. A. Galkin, É. A. Zavadskiĭ, V. M. Smirnov, and V. I. Val'kov. **20**(4), 111–2 (20 Aug. 1974); CPM-7502X0283

65.40.– Spin arrangements (neutron studies, etc.)

Neutron depolarization in MnF_2 —G. P. Gordeev, G. M. Drabkin, I. M. Lazebnik, A. A. Aksel'rod, and B. P. Toperverg. **19**(4), 135–6 (20 Feb. 1974); CPM-7406X0135

Observation of the propagation of spin waves in antiferromagnets —B. Ya. Kotyuzhanskiĭ and L. A. Prozorova. **19**(4), 138–40 (20 Feb. 1974); CPM-7406X0138

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65.50.– Studies of specific magnetic materials

Nonlinear absorption of electromagnetic energy in an isotropic ferromagnet —V. M. Gryanik. **19**(1), 25–6 (5 Jan. 1974); CPM-7406X0025

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Possibility of observing neutron spin precession in an antiferromagnet —V. G. Baryshevskiĭ. **20**(8), 262–3 (20 Oct. 1974)

65.60.– Domain effects, magnetization curves, and hysteresis

Asymmetry of motion of domain wall in an orthoferrite crystal —G. S. Kandaurova, V. O. Vas'kovskiĭ, A. V. Deryagin, and V. K. Raev. **19**(2), 80–2 (20 Jan. 1974); CPM-7406X0080

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Noncollinearity of sublattices and existence of a domain structure in $Dy_3Fe_5O_{12}$ near the magnetic-compensation point in strong magnetization fields —F. V. Lisovskiĭ and V. I. Shapovalov. **20**(2), 55–6 (20 Jul. 1974)

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65.80.+ Magnetomechanical effects and magnetostriction (including magnetoacoustic effects)

Role of magnetic interaction in oscillations of the magnetostriction of tin —V. M. Pudalov. **19**(7), 250–1 (5 Apr. 1974); CPM-7408X1408

Magnetoelastic resonance in single-crystal Fe + 3% Si —M. B. Gitis. **20**(6), 178–9 (20 Sep. 1974); CPM-7503X0712

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65.90.+ Other topics in magnetic properties and materials

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66. MAGNETIC RESONANCE AND RELAXATION IN CONDENSED MATTER; MOSSBAUER EFFECT

66.30.– Electron spin resonance and relaxation

Nature of noninteracting spins in organic paramagnets —A. V. Zvarykina, V. B. Stryukov, D. N. Fedutin, and A. B. Shapiro. **19**(1), 1–2 (5 Jan. 1974); CPM-7406X0001

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66.50.+ Ferromagnetic, antiferromagnetic, and ferrimagnetic resonances; spin-wave resonance

Contribution to the theory of magnetoelectric resonance —V. A. Kolganov. **19**(8), 270 (20 Apr. 1974); CPM-7409X0252

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66.60.– Nuclear magnetic resonance and relaxation

NMR and orientational phase transitions in orthoferrites —A. K. Zvezdin. **19**(2), 60–3 (20 Jan. 1974); CPM-7406X0060

Magnetic moment of Mn atoms in the $Ni_{1-x}Mn_x$ system —P. N. Stetsenko and V. V. Surikov. **19**(3), 97–100 (5 Feb. 1974); CPM-7406X0097

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Critical exponents for spectral and relaxation parameters of NQR in a phase transition in a molecular crystal —V. A. Mokeeva, I. V. Izmest'ev, I. A. Kyuntsel', and G. B. Soifer. **19**(9), 302–3 (5 May 1974); CPM-7409X0518

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66.80.+ Mossbauer effect; other γ-ray spectroscopy

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66.90.+ Other topics in magnetic resonance and relaxation

"Slow" depolarization of positive muons in aqueous solutions of paramagnetic ions —E. V. Minaichev, G. G. Myasishcheva, Yu. V. Obukhov, V. S. Roganov, G. I. Savel'ev, and V. G. Firsov. **19**(3), 92–4 (5 Feb. 1974); CPM-7406X0092

67. DIELECTRIC PROPERTIES AND MATERIALS

Observation of light diffraction by electron waves accompanying sound in piezosemiconductors —V. V. Proklov, V. I. Mirgorodskiĭ, G. N. Shkerdin, and Yu. V. Gulyaev. **19**(1), 7–8 (5 Jan. 1974); CPM-7406X0007

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68. OPTICAL PROPERTIES AND CONDENSED–MATTER SPECTROSCOPY

68.20.– Optical properties and materials

Rotation of the spin of particles in optically active media —V. G. Baryshevskiĭ. **20**(6), 190–1 (20 Sep. 1974); CPM-7503X0724

68.20.F Birefringence (including stress birefringence, flow birefringence, etc.)

Experimental observation of the birefringence of Mössbauer radiation in an antiferromagnetic hematite crystal —V. G. Labushkin, S. N. Ivanov, and G. V. Chechin. **20**(6), 157–8 (20 Sep. 1974); CPM-7503X0691

68.20.H Piezo–, elasto–, and acousto–optical effects

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68.20.J Electro–optical effects

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68.40.– Visible and ultraviolet spectra

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68.45.+ Stimulated emission

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68.50.– Impurity and defect absorption in solids

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68.60.D Photoluminescence

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68.60.H Cathodoluminescence

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68.80.+ Optical properties of thin films

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69. ELECTRON AND ION EMISSION BY LIQUIDS AND SOLIDS; IMPACT PHENOMENA

69.20.– Impact phenomena, including electron spectra and sputtering

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69.70.+ Field emission and field ionization

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71. OPTICS

71.10.– Propagation and transmission in homogeneous and isotropic media

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71.60.– Lasers

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71.60.C Gas and ion lasers

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71.60.N Laser beam interactions and properties

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71.60.Q Laser beam applications

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71.65.– Nonlinear optics

71.65.D Stimulated Raman, parametric oscillations, and other interactions of radiation with matter

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71.65.F Harmonic generation

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